

REMARKS

Claims 1, 6 and 13 are pending in this application.

The Office Action rejects claims 1 and 6 under 35 U.S.C. § 103(a) as being unpatentable over Fujita et al. (U.S. Patent No. 4,781,976) in view of Watt et al (U.S. Patent No. 4,808,458). This rejection is traversed.

The Office Action asserts that it “would have been obvious...to create a skin covering of Fujita with a grain as suggested by Watt et al. motivated by the desire to create an aesthetically pleasing skin surface...” (first full paragraph on page 4 of the Office Action). Applicants have carefully reviewed Watt et al. and can not locate any teaching or suggestion of a grain in Watt et al. Applicants respectfully request the Examiner’s assistance in pointing to that part of the Watt et al. disclosure that discloses the grain that the Examiner asserts provides the motivation for the combination of Fujita et al. and Watt et al.

In any case, the present claims require, *inter alia*, a “skin of a seat for a vehicle, comprising a skin body (1) made of a synthetic resin,... and the surface of said skin...[has] pluralities of recesses and projections (4, 5) dispersed therein, and the **height (h) of the projections (5) is in a range of $0.05\text{ mm} \leq h \leq 0.35\text{ mm}$.**”

The present specification demonstrates the criticality of the claimed range for the height of projections. In particular, the present specification demonstrates that, “[w]hen the skin of the seat has a roughened surface having a plurality of recesses and projections, the sense of a human’s skin feeling hot becomes duller than that when the skin of the seat has a flat surface. Therefore, the surface of the skin is formed into a roughened surface having a plurality of recesses and projections dispersed therein. In

this case, it is desirable that the height of the projections in the recesses and projections is in a range from 0.05 mm (inclusive) to 0.35 mm (inclusive). However, if the height is less than 0.05 mm, the above-described effect cannot be achieved. On the other hand, if the height exceeds 0.35 mm, there arise disadvantages that see-through portions are created, or dusts or the like are liable to be accumulated in the recesses, particularly when the skin is thin in total thickness" (see page 2, line 15 to page 3, line 2, of the present specification).

The present specification further demonstrates the unexpected properties achieved by the presently claimed invention. In particular, "[r]eferring to Fig.1, a skin 1 used in a seat of a two-wheeled motor vehicle as a vehicle has a base knitted-fabric 3 affixed to its back with an adhesive layer 2 interposed therebetween. The surface of the skin 1 is formed into a sueded fashion and hence, is a roughened surface having a plurality of recesses 4 and a plurality of projections 5. The height h of the projections 5 is in a range from 0.05 mm (inclusive) to 0.2 mm (inclusive). The skin 1 includes a skin body 6 made of a polyvinyl chloride composition, and a black infrared-ray reflective pigment 7 dispersed in the skin body 6. The polyvinyl chloride composition comprises a blend comprising components, which will be described below. The blend is a reinforcing blend intended to protect the infrared-ray reflective pigment. Meanwhile, in the polyvinyl chloride composition, the term "part" means "a part by weight" and likewise hereinafter.

Resin component (polyvinyl chloride)	100 parts
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Phthalate plasticizer	72 parts
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(wherein phthalate was made using an alcohol
having 10 to 14 carbon atoms)

Phosphate-based plasticizer (TCP)	7 parts
Ba-Zn based stabilizer	3 parts
Amine-based stabilizer	0.4 parts

The black infrared-ray reflective pigment 7 used is Paliogen Black (registered trademark) L0084 made by BASF, Co., and the amount of pigment mixed is set at one part per 100 parts of the polyvinyl chloride.

For comparison, a skin having a flat surface and a conventional structure was selected. This skin has a base knitted-fabric affixed to its back with an adhesive layer interposed therebetween, likewise as described above. A polyvinyl chloride composition for forming the skin comprises a usual blend having the following components:

Resin component (polyvinyl chloride)	100 parts
Phthalate plasticizer (DOP)	80 parts
Ba-Zn based stabilizer	3 parts

The pigment used is carbon black. The amount of carbon black mixed is set at 0.5 parts per 100 parts of the polyvinyl chloride.

The skin 1 according to the embodiment and the skin in the comparative example were subjected to the following heating test: Using an incandescent lamp, light was applied to the surface of each of the skins from a location corresponding to a height of 180 mm, and the temperature of the surface was measured by a thermo-viewer. When the temperature of the surface in the comparative example reached 90°C, the temperature of the surface in the embodiment was measured, and the result showed 59.7°C. Under the blazing sun showing an open-air temperature of 37°C, the highest temperature of the surface in the comparative example reached 78.9°C, but that in the

embodiment was 60.3°C. In any case, it was found that when the experimenter touched the surfaces in the embodiment with his or her hand, he or she did not feel hot, but when he or she touched the surfaces in the comparative example with his or her hand, he or she felt very hot. From the foregoing, an effect provided by the infrared-ray reflective pigment 7 was confirmed.” See page 4, line 1 to page 6, line 5, of the present specification.

The above-discussed unexpected properties and advantages achieved as a result of the inclusion of a plurality of recesses and projections in accordance with the present claims in comparison to a flat skin surface are clearly demonstrated by the results discussed above.

Fujita et al. discloses a skin covering for trims of automobiles with a “surface layer 2 having a thickness of 0.2-1mm (preferably 0.35-0.60 mm)” (column 3, lines 51-52). Fujita et al. shows a flat surface layer (see Fujita et al. Figure 1). Fujita et al. contains no teaching or suggestion that their surface layer has projections having a height in a range of $0.05 \text{ mm} \leq h \leq 0.35 \text{ mm}$, as required by the present claims. A layer of 0.2 mm having projections of .35 mm (**almost double the thickness of the layer**), and even a layer of 1 mm with projections of 0.05 mm, would certainly be expected to be shown in Figure 1 of Fujita et al.

However, as mentioned above, Fujita et al. Figure 1 shows a planar surface. Thus, it is clear from the disclosure of Fujita et al. that Fujita et al. is missing projections having a height in a range of $0.05 \text{ mm} \leq h \leq 0.35 \text{ mm}$, as required by the present claims. Thus, Fujita et al. would not be expected to achieve the unexpected advantages

discussed above (and in the present specification) that result from the presently claimed skin.

As the Office Action notes, Watt et al. disclose a “thermoplastic infusing layer 22 [that] is generally a thermoplastic compound which, when added in an effective amount, imparts desirable physical and chemical properties...” (column 3, lines 22+).

However, Watt et al. contains no teaching or suggestions that their surface layer has projections having a height **in a range of $0.05\text{ mm} \leq h \leq 0.35\text{ mm}$** , as required by the present claims. In fact, Watt et al. actually teach against such projections, stating that “[t]he abrading process usually removes all of the exterior surface thermoplastic infusing compound” (column 4, lines 27-29). Thus, Watt et al. would not be expected to achieve the unexpected advantages discussed above (and in the present specification) that result from the presently claimed skin.

As both Fujita et al. and Watt et al. do not teach or suggest the height (h) of the projections being in a range of $0.05\text{ mm} \leq h \leq 0.35\text{ mm}$, as required by the present claims, nor the unexpected advantages discussed above (and in the present specification) that result from the presently claimed skin, Applicants respectfully submit that the invention of present claims 1 and 6 would not have been obvious over the combination of Fujita et al. and Watt et al.

Although the Examiner asserts that projections of 0.05 mm to 0.35 mm would produce some optimal result in a combination of Fujita et al. and Watt et al., the Examiner has provided no teaching or suggestion in any of the references to the effect that projections of 0.05 mm to 0.35 mm produce any such optimum result. In fact, it is unclear

to Applicants how, for example, a projection of 0.35 mm could produce more of a suede like appearance in a 0.2 mm surface layer.

Thus, for at least the above reasons, reconsideration and withdrawal of the rejection of claims 1 and 6 under 35 U.S.C. § 103(a) are respectfully requested.

The Office Action also rejects claim 13 under 35 U.S.C. § 103(a) as being unpatentable over Fujita et al. and Watt et al. and further in view of Hutchinson et al. (GP 2,331,525). This rejection is traversed.

First, as the case, for Fujita et al. and Watt et al., Hutchinson contains no teaching or suggestions that their surface layer has projections having a height **in a range of 0.05 mm \leq h \leq 0.35 mm**, as required by present claim 13, nor of the unexpected characteristics achieved thereby. Thus, it is respectfully submitted that claim 13 would not have been obvious over Fujita et al. and Watt et al. and further in view of Hutchinson et al. for this reason.

Additionally, as the Office Action notes, Fujita et al. in view of Watt et al. fails to teach that the polyvinyl chloride additionally includes an amine-based stabilizer” (see the first full paragraph on page 6 of the Office Action). The Office Action then asserts that one of skill in the art would have included an amine light stabilizer in the polyvinyl chloride resin because of the teachings of Hutchinson et al.

However, Applicants respectfully note that Hutchinson et al. nowhere teaches or suggests including an amine light stabilizer in a polyvinyl chloride resin. Hutchinson et al. only discloses “a composition for **topical** administration to **already manufactured vinyl**” (see page 3, lines 5-6, emphasis added). There is no teaching or suggestion of using such a composition in a polyvinyl chloride resin.

Thus, the combination of Fujita et al. in view of Watt et al. with Hutchinson et al. also fails to teach that the polyvinyl chloride additionally includes an amine-based stabilizer" as required by present claim 13.

Therefore, claim 13 would not have been obvious over Fujita et al. and Watt et al. and further in view of Hutchinson et al. for this reason. Reconsideration and withdrawal of the rejection of claim 13 under 35 U.S.C. § 103(a) are respectfully requested.

Applicants respectfully submit that this application is in condition for allowance and such action is earnestly solicited. If the Examiner believes that anything further is desirable in order to place this application in even better condition for allowance, the Examiner is invited to contact Applicants' undersigned representative at the telephone number listed below to schedule a personal or telephone interview to discuss any remaining issues.

In the event that this paper is not considered to be timely filed, Applicants respectfully petition for an appropriate extension of time. Please charge any fee deficiency or credit any overpayment to Deposit Account No. 01-2300, referring to client-matter number 107348-00119.

Respectfully submitted,

A handwritten signature in black ink, reading "Robert K. Carpenter". The signature is fluid and cursive, with a horizontal line drawn underneath it.

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